



**getting
the
right
service**



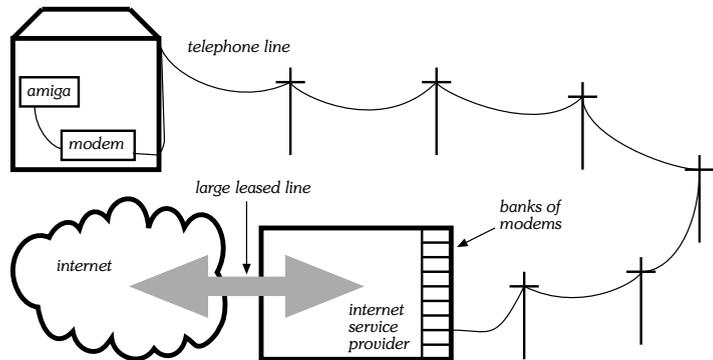
- **Joining the Internet**
- **How much will it cost?**
- **How does it work?**
- **Getting Internet streetwise**

Joining the Internet

In this chapter we'll take a look at some of the issues you might want to consider before making any final decisions on who should provide you with an Internet connection. We'll work out how much it is going to cost you to use the Internet, and we'll go behind the scenes with a brief look at how the Internet works and how to get streetwise using the net. We'll finish the chapter with the obligatory Internet history lesson.

Choosing the right Internet Service Provider

To get connected to the Internet you'll need an Internet Service Provider (ISP). ISPs are companies with large dedicated leased lines connected to the Internet, and banks of modems which subscribers can dial into in order to get on to the Internet. A leased line is a permanent connection between two networks; one network doesn't have to dial the other as the line between them is always open.



Picking the right ISP for you isn't always an easy task. If you live in a built-up urban area it is likely that there are several different providers only a local phone call away. The further away from a major city you live, the more limited your choice in Internet access will be.

Let's take a look at some of the issues which you must consider when choosing an ISP that's right for you.

Telephone costs

A large telephone bill is always something you can do without. You should look for an ISP that has a Point Of Presence (POP) which you can access for the price of a local phone call. To meet this requirement most large ISPs are trying to open as many POPs around the country as possible. (There are two POP acronyms, Point Of Presence and Post Office Protocol, so the term Point Of Presence may well change to get rid of any possible confusion.)

Calling an ISP with your modem will cost exactly the same as it would for you to talk to them on the phone for that period of time. So figure out how much time you can afford to spend online running up your phone bill.

Subscription fees

Subscription fees vary from provider to provider depending on the type of service you want. There is usually a one-off connection charge and then a monthly rental fee of at least £10 per month. As well as this you might have to pay extra if you want access to a Unix-style shell account, or if you want to have your own home page on the World Wide Web.

Online charges

Online charges are becoming less common among Internet Service Providers, but still common practice among the large online services such as BIX or CompuServe is to charge you per minute or hour of online time on the system. This is still the case with a number of systems so it is something you should ask any potential ISP.

Technical support

If things aren't working out for you, who can you call? Is a hotline technical support number available? Are they knowledgeable about Amiga computers or do they support only one or two platforms?

Modems

A common complaint with ISPs is that they never have enough phone lines or modems. So when you try to connect to the Internet at peak times, all you get is a busy signal when you ring their phone number. ISPs will usually quote a "modem ratio" which tells you the ratio of customers to modems installed. The lower this ratio is, the better. For example, a ratio of 10:1 would mean that the ISP has 10 customers for every modem installed. In other words, they don't expect more than 10% of their subscribers to be using the system at any one time. An ISP with high modem ratios might offer cheaper access but unless you plan to use the system at some obscure hour of the day, you may encounter the dreaded busy tone.

Access

This usually isn't a big issue. You need to check whether you are being offered full Internet access or just shell access. Assuming you get full access, then what protocols do they run? Do they allow standard SLIP/PPP access so that any type of computer can connect, or must you use some kind of proprietary front-end software which requires a PC or Macintosh?

Email address

If you are going to be using this provider for any length of time, you will start to make contacts on the Internet and will swap your email address with people you meet. You should check what form of email address you will be supplied with. Will it be something sensible like *jbloggs@isp.co.uk* or will it be some form of numeric email address as used by providers like CompuServe? Check if you can pick your own email address, and even your own domain name.

Newsgroups

There are literally thousands of Usenet newsgroups available, with discussions on every topic imaginable. Because there is such a large volume of traffic on these groups, some providers only provide a small subset of the total newsgroups available. Worse still, some providers censor groups which contain material they find offensive or unacceptable. Make sure that your provider has no restrictive policies on newsgroups and is open to requests to receive new groups.

Personal Web page

Once you get yourself fully connected and have spent time surfing the 'net, you may want to create your own personalised World Wide Web home page. Find out if this is possible and if there are disk usage charges on how much information your Web page(s) can use on the ISP's machines.

How much will it cost?

A common concern people have about connecting to the Internet is the effect it will have on their phone bill. Fortunately, you can use the Internet for hours at a time without running up a huge bill. Just because you may be connected to a computer in Australia doesn't mean you're making a long-distance phone call.

To connect to the Internet you make a phone call to the nearest local network which has an Internet connection, and you access other Internet sites via the local network's international connections. Companies which allow you to connect to their networks in this way are called Internet Service Providers (ISP). With any luck there'll be an ISP a local phone call away. This is discussed in more detail in the next section. What is important to note now is that the time you spend on the Internet will probably cost you no more than the cost of a phone call to a friend down the road.

To be more specific on costing, the average connection fee from an ISP should be somewhere between £15 and £25. This is a one-off charge. Rental on the account varies widely, but you should expect to pay between £10 and £15 per month.

After these fixed ISP charges you will have to estimate how much time you will spend online. Making calls during off-peak hours (evenings and weekends) is what you should be aiming to do. Try to figure out how many hours a week you intend to spend online. Give yourself an allocation of hours per week and try to stick to that figure. You can then budget in advance for what you can afford.

A word of warning. The worst thing you can possibly do is fall into the trap of "I've been online for so long it's going to be a huge phone bill anyway..." and stay online for hours and hours. If you lose track of how much time you are spending online, and deliberately avoid calculating how much you're spending, the massive phone bill you dreaded will be inevitable. You have been warned!

And another thing. If you are not paying for the phone bill yourself, make sure you let whoever is paying know well in advance of the amount of time you intend to spend online.

Internet Service Providers (UK and Ireland)

Listed to the left is a small selection of Internet Service Providers in the British Isles. Bear in mind that there may be local providers in your area who can offer you a better deal than the larger ISPs. As with Amiga software, seek out local advice where possible.

United Kingdom

BBC Networking Club

Tel: 0181 576 7799

Email: info@bbnc.org.uk

CityScape

Tel: 01223 566950

Email: sales@cityscape.co.uk

CIX

Tel: 0181 296 9666

Email: sales@cix.compulink.co.uk

Demon

Tel: 0181 371 1234

Email: sales@demon.net

EUnet GB

Tel: 01227 266466

Email: sales@britain.eu.net

Pipex

Tel: 01223 250120

Email: sales@pipex.net

Ireland

Indigo

Tel: 1-850-463436

Email: sales@indigo.ie

Ireland On-Line

Tel: (01) 8551739

Email: info@iol.ie

How does it work?

Computers on the Internet use IP (Internet Protocol) packets to send data from machine to machine. An important part of how this works is the addressing scheme used, which allows packets to be delivered to their intended destination.

Every machine connected to the Internet, even your Amiga, is assigned an IP address. This typically looks something like 123.456.78.9—four numbers separated by dots. A rough analogy to how these numbers work is the country and city codes in telephone numbers. The first two sets of numbers might represent a particular company, the third number a particular department, and the last number a specific machine. Communications equipment in the Internet can decipher these numbers at great speed and so figure out what to do with an IP packet, even if there are hundreds of thousands passing by every second.

Because people are better at remembering sensible sounding names instead of meaningless lists of numbers, the Domain Name System (DNS) was created. This translates machine names to IP addresses. For example, the IP address of Amiga Technologies GmbH World Wide Web server is 194.162.2.4, but its DNS name is *www.amiga.de*, somewhat easier to remember.

The *de* stands for Deutschland and is the DNS country code for Germany. Other codes are *uk* for the United Kingdom, *fr* for France and *ie* for Ireland. Chapter 6 contains a list of some of the more popular domain name country codes you'll encounter on your Internet travels.

The DNS system is used for almost all naming on the Internet, so email addresses will be of the form *username@domain.name*. World Wide Web servers and file servers will usually be *www.domain.name* and *ftp.domain.name*. For example, a popular site in the UK that keeps many Amiga programs online is called *ftp.doc.ic.ac.uk*. This is the FTP server in the Department of Computing in Imperial College, part of the Academic Community in the UK.

Who's in charge?

One of the amazing things about the Internet is its organisational structure—it doesn't really have one! It is no longer true to say that the Internet is an anarchy. In fact maybe it never was one, but what is most definitely true is its democratic, decentralised and distributed organisation.

No one person or company owns the Internet. The Internet wouldn't exist if it wasn't for all its users. Its name comes from the term "inter-network", what you do when you create a network between two or more computers. Because no one owns or runs the Internet, a very loose, decentralised and hence democratic structure has evolved for its operation. One network chooses to connect to another to exchange data. Each of these might then connect to other systems, which in turn are again connected to many more networks. This has been happening over the last two decades and has grown to be what we today call the Internet.

Regional bodies exist all over the world who coordinate their local part of the Internet. Cooperation between these bodies creates a sort of uniform feel to the Internet, so no matter where you live in the world, once you get yourself connected you feel right at home.

Getting Internet streetwise

Over the years a whole new culture has evolved on the Internet. You hear people talking about being “net.citizens”, living in cyberspace and having more virtual friends than real-world friends. Most major cities now have at least one CyberCafe, a place where people go to hang out, surf the net and, of course, have a coffee. This cultural side of the Internet can often be as bewildering and difficult to understand as the technical issues involved in getting connected. Let’s take a look at a few of things you need to know to get streetwise on the net.

Netiquette

Because of the liberal nature of the Internet, proper network etiquette is considered very important. There are a number of dos and don’ts which should be adhered to, especially when using email or news services. A good place to start is the Usenet newsgroup *news.newusers.questions*. You should find a message posted monthly there called “Emily Postnews answers your questions on Netiquette”.

Sometimes it’s the simplest things that annoy people the most. For example, when writing an email or news posting use the normal mixture of upper case and lower case letters. Don’t use all capitals as people will think you are SHOUTING.

If you have a “signature” attached to your messages where you put your name and contact details, keep it simple. Traditionally, four lines has been the upper limit on the size of a signature. Some people use 10-15 lines and draw little keyboard character pictures in their signatures. Please don’t do this. So unpopular is it that there is a whole newsgroup (*alt.fan.warlord*) devoted to slugging people who do do it.

If you fail to heed netiquette, if you disagree strongly with popular opinion or make personal attacks on people, then you run the risk of being “flamed” by other users. Flaming someone usually entails posting a message to a public forum attacking the views of the original poster. People who frequently flame others are known as “flamers”.

Smileys

Since emotion is very difficult to get across when communicating with someone using just a keyboard, something called a smiley is often used. The most common smiley is :-) and if you turn the page on its side, clockwise, you’ll see why. This denotes humour, jest, a joke, something tongue in cheek. If you want to denote sadness you use :-(

Smiling	: -)
Frowning	: - (
Laughing	: - D
Crying	: ' - (
Winking	; -)
Shocked	: - o
Angelic	O: -)
Devilish	: - >

Some of the more popular smileys can be seen to the left. This list is for your information only. I don’t recommend you use them all. In fact, I would suggest you use them sparingly. It can be very annoying when people finish every sentence with a smiley. Whole books have been written containing nothing but lists of smileys, yet 90% of Internet users really only know the most simple smileys, and there are often different explanations and opinions as to what exactly a certain smiley means. So once again, keep it simple.

FAQs

A frustrating aspect of the Internet can be trying to locate a particular piece of information. The system is so large and unwieldy, it’s often the case that you know the information must be out there somewhere, but how on earth do you go about finding it?

A common mistake beginners make is to ask what old-timers call a frequently asked question (FAQ). This irritates many existing net users since every month in Usenet newsgroups a list of frequently asked questions (and answers) about a particular topic area is posted. So before you send out a message which will be read by hundreds of thousands of users around the world, check if there's a FAQ for the topic—both your question and the list of answers are called FAQs. A good place to find a list of FAQs is the *rtfm.mit.edu* FTP site.

TLAs

“Eh? *rtfm.mit.edu*? What on earth is that?” I hear you cry. Well, unfortunately the jargon comes with the territory. After a while you get the hang of it and the acronyms, especially three letter acronyms (TLAs), start to sink in. Just to clarify the above name: *edu* stands for educational institution; *mit* stands for the Massachusetts Institute of Technology; and *rtfm*... well, RTFM is an age old Internet acronym—it means “read the f'ing manual” and is usually aimed at newcomers who have just asked an FAQ. Some popular acronyms are shown to the right.

BTW	By the way
FUBAR	F'ed up beyond all recognition
IMO	In my opinion
IMHO	In my humble opinion
IMNSHO	In my not so humble opinion
NRN	No response necessary
OTOH	On the other hand
ROTFL	Rolling on the floor laughing
RTFM	Read the f'ing manual
TLA	Three letter acronym

foobar

One final piece of Internet folklore which is worth mentioning is the word “foobar”. People use this as a throw-away word when explaining something, often splitting it in half. For example: “If we have two Amigas, one called foo and the other called bar...” Foobar is derived from the word “fubar”, which is the term Internet pioneers used to use for something that was “f'ed up beyond all recognition”.

The obligatory history lesson

About 25 years ago the Internet was born as a US Defence Department computer network called ARPAnet. The Advanced Research Projects Agency network was designed to support military research. Key features of the system were to withstand network outages (caused by bombs) and allow any two computers on the network to communicate as peers. They designed an Internet Protocol (IP) packet that would carry a chunk of data with enough addressing information to correctly get the packet to its final destination regardless of any network failures and without knowing in advance the route it would take.

Ten years later, universities started to install high-speed workstations and local area networks running Ethernet. Most of these came with the Berkeley Unix operating system which supported IP networking. Campus-wide networks were built that communicated internally using IP.

By the late 1980s the US Government's National Science Foundation created the NSFNET. This was a network of 56K bps leased lines connecting five supercomputer centres across the United States. The idea was to allow as many academic institutions nationwide to have access to the world's fastest computers. Regional networks were built around the five centres, and since both NSFNET and the universities were using the IP networking protocol, any computer could communicate with any other computer by forwarding the packets appropriately through the network.

The network proved a great success and over the last 10 years has been constantly upgraded and improved to help form an important part of the Internet's backbone. With today's commercial exploitation and increased traffic, many new Internet backbone links run at a minimum speed of 45M bps—that's 45 million bits per second, more than 800 times the speed of the original NSFNET.

